

1           **METHOD AND APPARATUS FOR ENCAPSULATING PARTICULATES****Abstract**

5           An improved method and device for decontamination of  
a contaminated process area is provided whereby a fine  
aerosol of an encapsulant for use in encapsulating the  
contaminants within the contaminated environment is  
generated. The aerosol is generated by a plurality of  
10          ultrasonic transducers located below the surface of a  
reservoir containing a capture liquid. The output of the  
transducers is focused to a point near the surface of the  
liquid to cause a surface disturbance which results in the  
formation of an aerosol of encapsulant from the capture  
15          liquid. A pressurization fan is used to force ambient air  
through the pressurization chamber to transport the  
aerosol to the process area to be treated. The aerosol  
forms a thin coating of encapsulant over the hazardous  
material thereby allowing the hazardous material to be  
20          safely removed from the process area or permanently  
adhered to the walls of the process area. If a chemically  
hazardous material is found in the process area, a capture  
liquid can be selected to neutralize the hazardous  
material. The process is especially effective at  
25          recovering radioactive dust from a contaminated process  
area.

DAP/wg

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